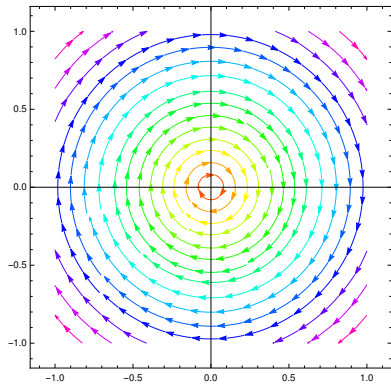
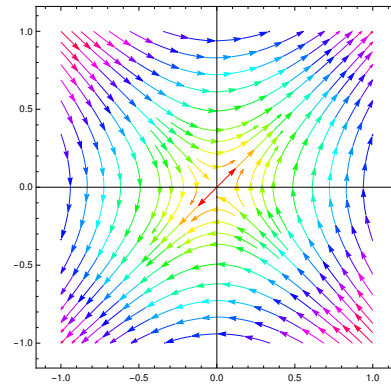


# Lecture 29: Curl, Div, Flux

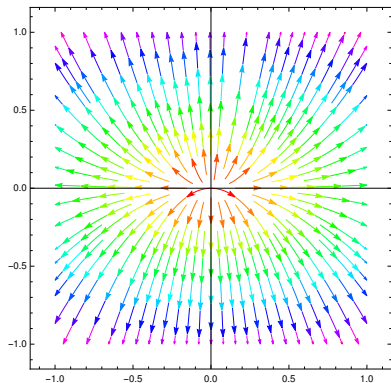
- 1 Which vector fields I-VI are incompressible?
- 2 Which vector fields I-VI are irrotational?



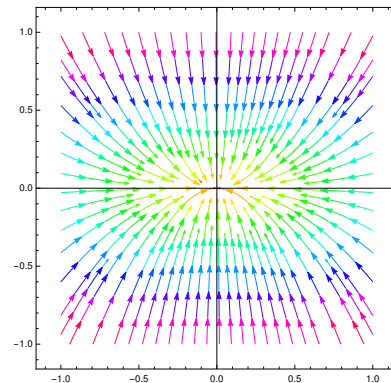
I



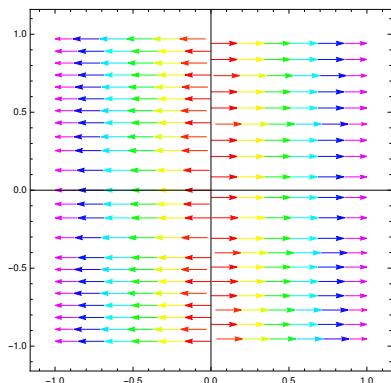
II



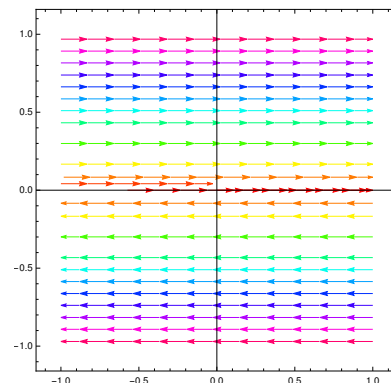
III



IV



V



VI

## Lecture 29: Flux integrals

- 1 I have a detector surface  $[u, v, 1 - u^2]$  with  $0 \leq u \leq 1, 0 \leq v \leq 3$ . A radiation field from a defective battery is of the form  $\vec{F}(x, y, z) = [x^2, 3y, z]$ . What is the flux of  $\vec{F}$  through this surface?